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Government growth in Latin America

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GOVERNMENT SPENDING IN LATIN AMERICA.

A Thesis

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
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By

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Abstract

The scope of government spending has gained significant attention in comparative politics. Disaggregate level data has allowed researchers to examine the impact of electoral rules and party fragmentation on the nature of government spending. Findings supported by large-N empirical tests suggest that fragmented polities are more likely to observe a shift in government expenditures: away from expenditures on public goods and in the direction of transfers and subsidies. In this paper, I test the applicability of these findings to Latin America. Using empirical evidence based on 13 Latin American countries over a 17 year period, the findings of this paper suggest that the number of parties does not impact government spending in Latin America, mainly due to an ideological vacuum that is characteristic of most countries in the region.

Introduction

Government spending is an important topic, one that has caught the attention of several researchers for over a century. A great deal of the research pursued in the last decade has introduced institutional elements such as party fragmentation (Mukherjee, 2003), degree of representation (Milesi, Perotti and Rosagno, 2000) and electoral competition (Tavits, 2004) as predictors of government growth. Great focus has also been placed on the level of analysis, evidenced by a concern with disaggregating government spending into two main types: public goods and services being one type and transfers and subsidies as another (Persson and Tabellini, 1999).

Mukherjee (2003) suggests that party fragmentation, represented by the number of political parties within the polity, has a significant impact on government spending, positing a direct relationship between fragmentation and expenditures on transfers and subsidies and an inverse relationship between party fragmentation and expenditures on public goods and services. Important to the causal mechanism is an incompatibility between multiple ideologies being represented in government: more parties in government means more constituencies being represented, which translates into more competing interests. With so many competing interests, politicians are forced to turn to logrolling practices, captured by transfers and subsidies, and end up shying away from legislation that entails expenditures on public goods (Mukherjee, 2003). The reason I feel it is important to test the applicability of these findings to Latin America is because of the region's marked lack of ideology (Dix, 1989; Sartori,

1994) and the need to control for electoral arrangements. With weak parties showing close to no ideology, Latin American polities could potentially be excluded from this causal mechanism. Additionally, when controlling for legislative arrangements (Milesi, Perotti and Rosagno, 2000), the impact of the sheer number of effective parties may be minimized.

The issue of ideology and government spending is of crucial importance to the region. Government expenditure is where all government services start and to understand what dictates a government's spending is likely to help clarify why countries are failing to invest on services that can help gap the distances between the haves and the have-nots. Issues of ideology speak to accountability, and lack of ideology can drastically deteriorate accountability and governance. Parties with no ideology offer candidates that run without platforms, making empty promises and mainly relying on charisma to get elected. Every candidate is similar to its competitor, only more or less likable. Without ideology and a clear platform, voters can only choose candidates on a trial and error basis, where a candidate is voted in and if he fails to perform, he gets voted out. Although this approach allows voters to weed out the bad candidates, it does nothing to help them choose good ones. The situation gets even worse when the pool of ideology empty candidates gets refilled but bad candidates can only be weeded out one at a time. Governance is deteriorated because voters can only punish bad officials or reward good incumbents, but they can do nothing when it comes to ensuring good candidates are elected to begin with. Ideology and platforms work to give voters directions that allow them to align their interests

with the available candidates. In Latin America, ideology free elections turns this key democratic process into a lottery, where voters pick an almost random candidate and their only consolation prize for having picked the wrong one is to get to vote him out in the next election. No guarantee this candidate will be replaced with a more suitable one is offered. Finally, without ideology, many societal interests end up being left without a clear channel to represent them in government, with their chances of being heard being minimized as the end result.

Literature Review

Concern for government spending has interested researchers of comparative politics for over a hundred years. Researchers have been interested in the mechanisms that fuel the expansion of the public sector for over a century, evidenced by Wagner's important contributions in the late 19th century (Peacock and Scott, 2000). A great deal of research has emerged, very diverse in theory, methodology and data (Lowery and Berry, 1987).

Perhaps the forefather of all theories of government growth is Wagner's Law of Increasing State Activity. This theory posits a relationship linking industrialization, urbanization and education to the expansion of the public sector (Bird, 1971). Wagner's Law posits that increases in public goods are a product of increased demands by organized industrial workers, coming at the costs of growth in the private sector (Gandhi, 1971; Goffman and Mahar, 1971). Bureau Voting Theory rejected the role of industrialization and urbanization, suggesting that the main driver of public sector expansion is an artificial demand for government services created by self-interested government employees (Niskanen, 1971). Fiscal Illusion theory tries to explain government growth by linking convoluted tax systems to the masking of the costs of public goods. According to this theory, tax systems can hide the costs of public goods and therefore stimulate their growth (Goetz, 1977) Empirical support for these theories has varied, causing them to loose some of their impetus

Using a cross country dataset, Cameron (1978) is one of the first researchers to contemplate the impact of economic factors and political ideology on the expansion of the public sector. The findings suggest that economic openness (international trade) impacts government growth by forcing government to expand its services in order to aid its industries and workers during periods of economic instability. The theory found empirical support in a cross sectional study that measured the impact of such variables in 18 different countries in two points in time. Although the work represents a significant theoretical contribution to the literature, the empirical testing only included OECD countries and leaves an important question unanswered: wouldn't international trade stimulate growth only in the public sector of countries rich enough to afford the costs involved in building safety nets? How does international trade impact public sector growth in the developing world?

In discussing international trade and support nets, Lindbeck (1976) elaborates on two main types of support, which he calls active and reactive stabilizers. Active stabilizers consist of social insurance mechanisms such as welfare nets and job training, which are readily available year round and actively help economies avoid crisis. Reactive stabilizers are only available during periods of economic crisis, when governments react to them by adopting temporal measures of support that are discontinued once crises are minimized (Lindbeck, 1976).

Instead of devising new and competing theories of government growth, some researchers focused on empirically testing available theories. These

authors adopted datasets what look at British government growth (Peacock and Wiseman, 1967), American central government (Lowery and Berry 1983, 1984a, 1984b, 1987, Lewis-Beck and Rice, 1985) and American state government (Garand, 1988).

Lowery and Berry (1987) placed a great deal of concern on organizing the literature. They divided competing theories into two main groups: responsive and excessive government growth theories. Responsive theories perceived growth as a natural demand to public services, while excessive theories perceived growth as a response to an artificial demand created to mask the actual government's interest in its own expansion (Lowery and Berry, 1987). The authors were careful to line up the main competing theories and test all of them using the same dataset, hoping that one theory would emerge as the prevalent predictor.

Concern for econometric preciseness introduced advanced methods to the research. Time series comprised of 60 year time spans were not uncommon to this period of the literature (Lewis-Beck and Rice, 1985). Concern for variations within specific periods pushed researchers to introduce cross sectional data. State level data on American government expansion instantly introduced a fifty fold increase in the datasets being used (Garand, 1988). Concern for inflation and monetary instability also lead researchers to introduce corrections, with models using deflated as well as undeflated measures (Lowery and Berry 1984a). New variables such as age strata and post-war periods were taken into account (Lewis-Beck and Rice, 1985). Population age (strata) is important

because different population age make-up will alter the prevailing interests, thus impacting the needs for government services and, consequently, its size.

Research using American government datasets (Lowery and Berry 1983, 1984a, 1984b, 1987; Lewis-Beck and Rice 1985), although methodologically strong, suffered from limited availability of data. Even studies that went back as far as the early 1930s still only used around 50 observations (Lewis-Beck and Rice, 1985). Limitations relating to the availability of data introduce instability to the parameters, which can compromise the empirical support. Research using state level data (Garand, 1988) increased observation fifty fold, but elements relating to shared extraction limitations significantly reduce wide variation of the dependent variable. Although there is a variety of competing theories, not one single theory is able to emerge as the best predictor of government growth (Lowery and Berry, 1983). “We face many underdeveloped models that are unsubstantiated by empirical research” (Lewis-Beck and Rice, 1985, pg. 7). Much of this inability can be blamed on the limitations imposed on researchers by the availability of data.

Yet another limitation of concentrating on American government is that it introduces important challenges to the generalizability of contending theories. Many of the elements that can have an impact on government expansion, i.e. degree of economic advancement, voting regulations, electoral competitiveness, democratic degree or legislative politics, were all neglected by the theories being tested in the previously mentioned research. Concerns for the impact of parliamentary versus presidential systems, advanced versus developing

societies, single member district versus proportional representation were not taken into account. Their impact, although theoretically plausible, had yet to find a place in the literature.

More accurate predictors of government growth would require the inclusion of these unexamined variables. Lewis-Beck and Rice (1985) are careful to suggest a new focus, evinced by their discussion of the theoretical framework for explaining government growth (see figure 2, Lewis-Beck and Rice, 1985, pg. 8).

Tavits' (2004) research incorporates some of the unexamined variables that Lewis-Beck and Rice(1985) saw as neglected. Tavits argues that democracies enjoying consensus institutional structures (Lijphart, 1999) are associated with larger government size. Consensus institutions lead to larger governments because they give voice to a much greater proportion of the population. Empowered by such voice, various constituencies make more demands and governments grow as they address them. While controlling for international trade and federalism, the author finds empirical evidence to her claim. Federalism is introduced to the model because it is argued that “federalism creates competitive veto points that function to restrain government” (Tavits, 2004, pg. 350)

New research, incorporating the previously neglected elements that are typical of comparative politics, gained a more prominent space in the literature. Persson and Tabellini (1999) switch their focus from the size of government to the scope of government, meaning their research goes beyond examining how

much growth governments are experiencing, vis-à-vis their aggregate size as a percentage of GDP, but actually exam where this growth is taking place, vis-à-vis growth on expenditures on transfers and subsidies or expenditures on public goods. Their findings suggest that transfers and subsidies are the expenditure of choice when politicians are trying to address their constituencies. Although of great importance to the study of government growth, the argument is highly theoretical and only contemplates two-party systems.

Milesi, Perotti and Rostagno (2000) research the impact of electoral rules on government spending. They argue that geographical constituencies, which are characteristic of single-member district plurality systems, are more likely to stimulate expenditures on public goods. Proportional representation systems, on the other hand, are characterized by social-economic constituencies that cut across geographical regions and can be better targeted through expenditures on transfers and subsidies. The authors highlight “the importance of constructing measures that go beyond the majoritarian/proportional dichotomy” (Milesi, Perotti and Rostagno, 2000, pg. 34)

Focusing on party fragmentation, Mukherjee (2003) argues that multiparty governments are associated with greater expenditures on transfers and subsidies. The causal mechanism suggests that more parties are the result of more interests being represented in the legislative body. With so many interests being represented, we observe greater disagreement on optimal policy writing. Being unable to agree on optimal policy writing, legislators have an incentive to engage in log-rolling politics, where each legislator agrees to support a piece of

legislation as long as he/she is able to add to this legislation some kind of transfer to his/her constituency. "In contrast with the dispersed nature of benefits from spending on public goods, the benefits from spending on subsidies and transfers can easily be targeted to special interests... As a consequence, each political party in multiparty legislatures has strong incentives to initiate and support proposals for higher spending on subsidies and transfers because doing so will allow them to maximize their political support." (Mukherjee, 2003, pg 707)

How does the number of parties impact government spending in Latin America? The region is marked by volatile parties with ideologically ambiguous platforms (Sartori, 1994). Parties' efforts to reach larger audiences tend to minimize ideology in hopes of broadening their constituencies. "The catch-all (*referring to Latin American parties*) party is one that eschews dogmatic ideology in the interests of pragmatism and rhetorical appeals to "the people", "the nation", "progress", "development", or the like, that electorally seeks and receives support of a broad spectrum of voters that extends the party's reach well beyond that of the social class or religious denominations, and develops ties to a variety of interest groups instead of exclusively relying on the organizational and mobilization assets of one" (Dix, 1989, pg. 26-27).

With ideology being put aside and parties sharing a large portion of their constituencies, transfers lose some of their targeting power and may no longer take precedence over public goods. If that is true, the sheer number of parties may lose some of its strength as the predictor of larger expenditures on transfers

and subsidies and lower expenditures on public goods, as suggested by Mukherjee (2003).

What is the impact of electoral arrangements on government's expenditures in Latin America? Although the vast majority of Latin American countries adopt proportional representation arrangements, the varying minimum thresholds to representation introduce differences in how proportionally representative these countries are, as suggested by Milesi, Perotti and Rostagno (2000). Different levels of federalism also introduce constraints that restrain spending and may impact legislators' ability to distribute transfers and/or public goods.

In all, the literature on government growth highlights international trade (Cameron, 1978), population age make up (Lewis-Beck and Rice, 1985), income (Lowery and Berry, 1983), electoral rules (Milesi, Perotti and Rostagno, 2000; Tavits, 2004) and number of political parties (Mukherjee, 2003) as strong predictors of government growth

International trade stimulates growth by creating a demand for services that can help minimize the impact of economic crisis (Lindbeck, 1977; Cameron, 1978). Differences in age make-up of the population create different interests, all with specific needs and respective costs (Lewis-Beck and Rice, 1985). Richer societies place bigger demands on government, forcing it to grow in response (Lowery and Berry, 1983). Electoral rules stimulate growth by creating parties that cater to either geographical or socio-economic constituencies (Milesi, Perotti and Rostagno, 2000). Federalism hampers growth by creating impediments to

the distribution of resources (Tavits, 2004). Finally, more political parties stimulate greater expenditures on transfers and subsidies by creating an incentive to log-rolling politics (Mukherjee, 2003).

This research uses repeated variations of a cross-sectional time-series model in order to assess how these previously mentioned variables impact government spending on transfers and subsidies as well as goods and services in thirteen Latin American countries.

Theory

This research is mainly interested in the understanding the impact of party fragmentation and electoral rules in Latin America. These two relationships can be summarized by four main hypotheses, two relating to the electoral rules and two relating to the number of parties.

Electoral rules impact government expenditures by creating either parties that cater to geographical constituencies, which would be targeted by public goods, or parties that cater to socio-economic constituencies, which would be targeted by expenditures on transfers and subsidies (Milesi, Perotti and Rosagno, 2000). In order to produce testable hypotheses, I look to the countries' threshold to representation. I expect that countries with a larger threshold show greater expenditures on public goods and services and lower expenditures on transfers and services.

H1A: Larger thresholds are positively associated with expenditures on public goods and services.

H1B: Larger thresholds are negatively associated with expenditures on transfers and subsidies.

The number of political parties is argued to be positively associated with transfers and subsidies and negatively associated with expenditures on public goods and services (Mukherjee, 2003). Although Latin American parties' lack of ideology (Sartori, 1994) and broad constituencies (Dix, 1989) may detract from

the impact of the number of political parties, I state my hypotheses according to Mukherjee (2003).

H2A: Greater number of political parties is negatively associated with expenditures on public goods and services.

H2B: Greater number of political parties is positively associated with expenditures on transfers and subsidies.

These variables are not, however, the only variables to have an impact on government spending. The literature has pinpointed federalism, population age make up, government majority, level of economic development, openness to international trade, electoral cycles and restrictions imposed by structural adjustment programs as having an impact on expenditures. These variables are included in the model in order to control for their impact and ensure that the variables of interest are only capturing their appropriate share of the relationship. I discuss the relationship of each of the control variables in further detail in the remaining part of this theory section.

In order to control for the impact of the population age make up (Lewis-Beck and Rice, 1985), I introduce an elderly population variable. The elderly population consists of an easy target for transfers and subsidies, the most common being social security transfers. I expect that larger elderly populations are positively associated with transfers and subsidies.

Although Cameron's (1978) research only analyzed the impact of international trade on aggregate values of government spending, Lindbeck's (1977) active and reactive stabilizers allow us to extrapolate their impact on

expenditures on public goods and transfers and subsidies. Active stabilizers are services available to a wide portion of the population. I classify these services, such as job replacement programs and skill development programs, as public goods expenditures. Reactive stabilizers are resources that are allocated to specific recipients at specific points in time, such as industries under economic distress. I classify these as expenditures on transfers and subsidies. I expect that Latin American countries' limited resources make reactive stabilizers prevalent, thus creating a positive relationship between openness to international trade and expenditures on transfers and subsidies.

Federalism is argued to minimize both expenditures on public goods and services as well as expenditures on transfers and subsidies by creating more veto players that hinder overall government spending (Tavits, 2004). I expect that greater degrees of federalism will be negatively associated with expenditures on public and services as well as with transfers and subsidies.

Degree of economic development is argued to have a positive impact on public goods and services (Lowery and Berry, 1984). More economically developed countries put greater pressure on government to deliver greater services and infra-structure. As countries become more affluent, greater demands for public services increase and we observe an increase in such expenditures. I expect that greater levels of economic development are associated with greater expenditures on public goods and services as well as on expenditures on transfers and subsidies.

Mukherjee (2003) adopts Weingast's (1979) "norm of universalism", which is a "tendency to seek unanimous passage of distributive programs through inclusion of a project for all legislators who want to one" (Weingast, 1979, pg. 249). I control for government majority because governments enjoying majority status in the legislative body do not need to adopt such norm and include projects catering to all legislators in order to secure the unanimous passage of their proposed legislation, seeing how they already enjoy the majority. Divided governments are the only ones who need to adopt the norm and therefore I expect that divided governments are positively associated with greater government expenditure.

I control for electoral cycles. Literature on the political economy of electoral cycles argues that politicians increase spending in the year before elections in order to create more momentum to their reelection campaign (Remmer, 1993). It is also argued that politicians cut on spending the year after election in order to pay for the overspending used to boost the campaign in the previous year. I expect that the year before an election is associated with increased government expenditures, while the year after the election is associated with reduced expenditures.

Structural adjustment programs are another control variable. I control for these programs because countries entering a structural adjustment programs (SAP) are expected to cut on their public expenditures as a condition to having access to loans (Abouharb and Cingranelli, 2006). I expect that countries under SAP observe reduced government spending.

Finally, I also control for the degree of democratic development. Countries that are more democratic afford their populations greater opportunities to demand services, which increase government services.

Data and Methods

For the statistical analysis, I chose a cross-sectional time-series model. I chose such a model because much of the literature on government expansion has suffered from either cross sectional or times series models, neither of which can provide enough variance (Lowery and Berry, 1987). The cross sectional time series model works well because it combines the strength of the two separate models (*purely cross-sectional or purely time-series*) and allows me to assess the impact of the variables of interest while maximizing the variation of all other control variables.

The thirteen countries used in the models are: Argentina, Bolivia, Brazil, Costa Rica, Colombia, El Salvador, Mexico, Nicaragua, Paraguay, Peru, Panama, Uruguay and Venezuela. The data used for the model is yearly, with observations from 1984 through 2000. I decided to start the data in 1984, when the majority of the countries in the dataset had begun their transitions to democracy. I find it appropriate to use yearly data because I am more concerned with the scope of government than with its size, meaning I am interested in observing not simply how much growth is taking place (aggregate measures), but where this growth is happening. A concern with the scope of government calls for addressing growth at a more disaggregated level. I disaggregate government spending into two main components: expenditures on public goods and services and expenditures on transfers and subsidies, in accordance with the literature

(Persson and Tabellini 1999; Milesi, Perotti and Rostagno, 2000; Mukherjee 2003).

While government size is a long term phenomenon and thus can be best examined by longer period averages that would increase variation and minimize heteroskedasticity, period averages will lead to a loss of information that is important to the study of government scope. Budgetary and fiscal pressures on government spending limit government expansion to small fractions of the GDP. Even though examining government size (aggregate levels) with yearly data is likely to underestimate the impact of the independent variables, as variation in the part of the dependent variable are too small and highly auto-correlated (Barro, 1994), examination of the scope of government (disaggregate levels) does not suffer from such limitations. In-depth analysis of disaggregate level spending shows that even though a country might have a constant aggregate level of spending of X , there is still room for great variation of the elements that made up X . Take expenditures on public goods as Y and expenditures on transfers and subsidies as Z . In year one $X=(Y+Z)$, in year two $X=(Y-1)+(Z+1)$, and year 3 $X=(Y+1)+(Z-1)$. A country exhibiting constant government spending at the aggregate level can potentially exhibit a great deal of variation from how much it spends on subsidies or public goods from one year to the next.

Using yearly data does raise specific concerns, as cross sectional time series models often allow for temporally and spatially correlated errors as well as heteroskedasticity, especially with monthly or yearly data. In order to account for these problems, I chose to use panel corrected standard errors (PCSE) and

panel specific first degree autocorrelation correction. PCSEs provide superior measures when compared to regular OLS, whether or not heteroskedasticity and autocorrelation plague the model (Beck and Katz, 1995).

Considering that I am testing the impact of the independent variables on two dependent variables, public goods and services being one and transfers and subsidies as another, I run separate models. The models are identical, only differing in their dependant variables. The choice to adopt two identical models mirrors that of Mukherjee (2003).

Before I ran the models, I chose to run a preliminary model. This preliminary model uses all of the same independent variables to predict government growth at the aggregate level. This is a way for me to pre-test how the variables of interest behave at the aggregate level before I can observe their impact on disaggregate measures.

Disagreement on the effectiveness of using a lag of the dependent variable as a predictor of the dependent variable pushed me to run every model twice. For every dependent variable (aggregate level spending, expenditures on public goods and services and expenditures on transfers and subsidies), I run a model with a lag of the dependent variable as an independent variable and another model without that lag.

I also had to account for a few outlier points in the data. Nicaragua's trade variable showed large spikes. Nicaragua's aggregate government spending reached an unusual 72% in 1990. The country's ENPP variable reached the dataset's highest value, 14.28, in 1984. These and a few other outlier points

could potentially introduce instability to the parameters. Not having collected this data myself, I don't know whether these spikes in variation are mistakes associated with the reporting of the data or actual periods of unusual spending and fragmentation.

In order to address this potential problem, I chose to run every model twice. One model uses the dataset with its original data as it was collected and with outliers remaining unchanged. In a second model, I deal with the outliers by simply erasing them from the dataset and treating them as missing values.

Data availability issues presented yet another constraint to the modeling. Lack of data on a variable capturing a federal unit's authority over spending and taxing (SAS) drops the number of cases from around 160 observations to 90, a loss of approximately half of the dataset. Such a drastic loss is likely to introduce instability to the parameters, especially at a time-series model where much of the variation is compromised by the time nature of the data. In order to solve this problem, I chose to run every disaggregate-level spending model twice. One model uses the SAS variable and one model does not use it. This is a good way to make use of the limited data without incurring in such a sharp loss of data.

All in all, after taking into account the controversy over including a lag in time series models, outlier points in the data, concern for aggregate and disaggregate level data and limited availability of data on specific variables, I run a total to twenty models. Results for all these models are available at appendix B. Although the number of models sounds oddly high, these models are truly small variations of one main model. Basically, to one main model I add a

variable (lags of the dependent variable, SAS), change the dependent variable (aggregate level spending, expenditures on public goods and services, expenditures on transfers and subsidies) or use a different dataset that accounts for problems with the outlier points.

The two main dependent variables are expenditures on public goods and services as a percentage of total GDP and expenditures on transfers and subsidies as a percentage of total GDP. These data were made available by the International Monetary Fund's Government Financial Statistics.

The independent variables are: degree of federalism, international trade, degree of economic development, number of political parties, electoral rules, government majority, elderly population, state's authority over spending, year before a legislative election, year after a legislative election, year before executive elections, year after executive elections, level of democracy, level of democratic development. The data for the degree of federalism, number of political parties, state's authority over spending, electoral rules and government majority, legislative and executive elections are made available by the Database of Political Institutions 2003. The data used for aggregate level spending, elderly population, international trade and level of economic development are made available by the World Bank's World Development Indicators 2004. The data for the degree of democratic development is made available by the Polity IV project.

An in-depth discussion of each variable, accounting for the data source operationalization process and data overview is found at appendix A.

Findings

The variable used to assess the impact of electoral rules, threshold, produced inconclusive results. An initial analysis of the impact of the variable on aggregate measures of government expenditures produced statistically significant positive coefficients in all variations of the model (with and without adding a lag for aggregate expenditures as a predictors and using the original dataset as well as the dataset eliminating the outlier points). These finding simply suggest that governments grow an average of 1.5 percentage points for every one percent increase in the threshold to representation. This is merely a preliminary finding that does not tell us much about where this growth is taking place.

Although significant at the aggregate level model(s), the variable does not perform at the goods and services or the transfers and subsidies model(s) Tables 2 and 3 show the results for the variable in all models and the variable failed to produce statistically significant results in all of the model's possible variations.

In table 4, I show the results for expenditures on goods and services using the state spending authority variable. The threshold variable does produce statistically significant results at his model across all four variations. The coefficients are negative, suggesting that as the threshold to representation increases, expenditures on public goods and services decrease. This finding is counter-intuitive. Milesi, Perotti and Rosagno's (2000) findings suggest that as

we move to majoritarian type systems, we expect to see greater expenditures on goods and services.

Table 1: Results for Models Using Aggregate Government Spending.

	Original		Outliers		Original		Outliers	
	Coeff.	Z	Coeff.	Z	Coeff.	Z	Coeff.	Z
Lag of exped.	Not included				0.48	3.86**	0.48	3.39**
Federal	1.29	1.40	1.61	2.23*	1.07	2.04*	1.20	2.23*
Threshold	1.83	4.13**	1.88	3.39**	1.14	2.84**	1.25	3.26**
ENPP	-0.50	-1.07	-0.48	-1.02	0.14	0.38	0.16	0.45
Trade	-0.11	-1.58	-0.10	-1.39	-0.11	-0.26	0.00	0.23
GDP/pc	-65.9	-4.98**	-69.5	-4.12**	-29.2	-3.25**	-30.6	-2.62**
Elderly popul.	5.03	1.48	5.71	1.22	4.8	2.48**	5.16	2.02*
Polity	0.098	0.33	0.16	0.44	0.21	0.94	.24	0.97
Gov. Majority	2.71	1.76	2.34	1.68	0.42	0.45	0.19	0.21
Struct. Adj. Pr.	-0.21	0.88	-0.19	-0.18	-0.77	-0.66	-.71	-0.49
Before Ex. El.	0.41	0.49	0.38	0.46	0.26	0.27	0.18	0.18
After Ex. Elec.	-0.47	-0.54	-0.48	-0.55	-0.17	-0.16	-0.27	-0.25
Before leg. ele	-1.92	-2.49*	-1.90	-2.37*	-2.3	-2.47**	-2.19	-2.23*
After Leg. Ele.	0.08	0.92	0.08	0.10	0.35	0.35	0.45	0.44
Constant.	261.1	5.23**	271.9	4.45**	108.1	3.35**	111.6	2.71**
	N=148 R ² =0.84		N=145 R ² =0.80		N=144 R ² =0.90		N=141 R ² =0.87	

** Statistically significant at the 1% level

* Statistically significant at the 5% level

It is hard to argue that threshold to representation truly capture how majoritarian a political system really is, which should account for some of the

variable's failure to produce cohesive results. Beyond that, I should also mention that other important elements speak to the impact of electoral rules. The role of upper houses in initiating, approving and vetoing both legislation and budgeting can have an enormous impact on how governments spend their money. Should Milesi, Perotti and Rostagno's (2000) theoretical argument be correct, upper houses should show a natural penchant to expenditures on public goods and services due to their inherently majoritarian nature. Should upper houses have an important role in writing and passing legislation, expenditures on goods and services should be favored. Data speaking to the electoral rules of upper houses, upper house legislative writing roles and upper house budget roles all relate to how majoritarian a political system can be and thus can add a new dimension to the majoritarian argument that the threshold variable is trying to capture.

Although I was unable to secure such data, I believe that further research that takes these elements into account can do a great job at clarifying the impact of electoral rules on government spending. With the results produced by the data used in this study, I am unable to find support for hypothesis one.

ENPP, effective number of political parties, is the variable used to test hypothesis two. The hypothesis states that greater number of political parties is negatively associated with expenditures on goods and services and positively associated with expenditures on transfers and subsidies. This variable failed to produce statistically significant coefficients in virtually all of the twenty possible variations of the model. Using either the aggregate or disaggregate level data, with or

without lags and accounting for outliers, ENPP still failed to produce statistically significant coefficients.

Table 2: Results for Models using Expenditures on Goods and Services.

	Original		Outliers		Original		Outliers	
	Coeff.	Z	Coeff.	Z	Coeff.	Z	Coeff.	Z
Lag of G&S.	Not included				0.45	7.26**	0.40	5.34**
Federal	-0.05	-3.46**	-0.03	-3.22**	-0.3	-5.79**	-0.03	-5.17**
Threshold	-0.01	-1.45	-0.01	-0.67	-0.004	-0.81	-0.003	-0.49
ENPP	-0.01	-1.36	-0.02	-1.85	-0.01	-1.61	-0.01	-1.78
Trade	-0.001	-0.38	0.001	1.44	0.000	0.07	0.006	0.91
GDP/pc	-0.46	-2.75**	-0.47	-3.3**	-0.11	-1.63	-0.18	-2.09*
Elderly popul.	0.14	4.93**	0.13	5.03**	0.02	1.05	0.04	1.69
Polity	-0.01	-2.84**	-0.08	-1.54	0.005	1.62	0.004	1.23
Gov. Majority	0.06	2.25*	0.05	2.62**	0.02	1.35	0.03	1.63
Struct. Adj. Pr.	-0.03	-1.97*	-0.03	-1.75	-0.02	-1.18	-0.02	-1.20
Before Ex. El.	-0.03	-1.91	-0.03	-2.12*	-0.05	-2.36*	-0.05	-2.49**
After Ex. Elec.	-0.01	-0.94	-0.01	-0.82	-0.02	-0.69	-0.02	-0.90
Before leg. ele	-0.009	-0.54	-0.006	-0.03	0.007	0.39	0.01	0.57
After Leg. Ele.	0.003	0.19	0.01	0.55	0.01	0.64	0.02	0.79
Constant.	2.14	3.64**	2.02	3.99**	0.67	2.40**	0.91	2.7**
	N= 162 R ² =0.71		N=159 R ² =0.64		N=159 R ² =0.84		N=157 R ² =0.81	

** Statistically significant at the 1% level

* Statistically significant at the 5% level

Mukherjee's (2003) argument for the link between number of parties and government spending is couched on Weingast's (1979) norm of universalism,

suggesting a tendency to include distributive programs to all legislators in order to ensure the passage of a given bill. I introduced a government majority dummy variable that can help capture the need to adopt the universalism norm.

Government's enjoying the majority of the legislative do not need to keep on tacking distributive programs to bills because the passing of a bill is ensured by their majority. The results for the government majority variable were inconclusive.

Although table 2 shows a positive and significant relationship between government majority and expenditures on public goods, this same relationship does not hold when I introduce the lag of the expenditures on goods and services as an independent variable. The majority dummy performs again at the model using state authority over spending as a predictor of expenditures on public goods and services (table 4). This time, the coefficients are significant in all four variations of the model. The variable never produces statistically significant coefficients when used as a predictor of government expenditures on transfers and subsidies. These findings appear to suggest that government's unencumbered by lack of majority related restrictions spend more on public goods and services. The lack of majority, which according to the norm of universalism, would fuel expenditures on transfers and subsidies, cannot be corroborated by these findings. The government majority dummy never produced statistically significant coefficients linking majority status to expenditures on transfers and subsidies in any of the eight variations of the transfers and subsidies models.

The two variable's (ENPP and government majority) failure to produce statistically significant coefficients does not produce enough evidence to support hypothesis two. The number of political parties and the ability of these parties to hold a majority do not appear to impact government spending in Latin America. The lack of ideology and catch-all parties with large and broad constituencies may be minimizing conflicting interests. Without clearly marked schisms between parties and overlapping constituencies, parties can agree on optimal policy even if not one single party controls the majority, thus possibly explaining why the government majority and ENPP variables cannot perform.

The final element I feel important to address is federalism. As I have mentioned in the discussion of electoral rules, it is important to take the role of the upper house into account. The federalism variable is one that usually captures some of that relationship, mainly because federal states are usually associated with stronger upper houses. I should point out that adding a measure of degree of federalism does not cover for the elements such as senate electoral rules or role of the senate in budgeting procedures. The measure does, however, help us understand how more federal states can act as veto players and how that impacts spending.

The federal measure produces conflicting results at the aggregate spending model (table 1). Results are significant at all but the one variation that does not account for outliers and does not use the lag of the aggregate expenditure as a predictor. The positive sign of the coefficient suggests, contrary to the literature, that more federal states actually spend more. This finding

initially contradicts the literature's suggestion that federal divisions hinder spending by acting as veto players (Tavits, 2004)

Table 3: Results for Models using Expenditures on Transfers and Subsidies.

	Original		Outliers		Original		Outliers	
	Coeff.	Z	Coeff.	Z	Coeff.	Z	Coeff.	Z
Lag of T&S.	Not included				0.25	3.18**	0.25	4.21**
Federal	0.05	4.09**	0.04	3.59**	0.04	5.54**	0.03	4.41**
Threshold	0.00	0.85	0.00	0.6	0.01	1.78	0.00	1.13
ENPP	0.01	1.57	0.01	1.79	0.00	0.72	0.00	0.82
Trade	0.00	-5.57**	0.00	-5.04**	0.00	-4.88**	0.00	-5.1**
GDP/pc	-0.02	-0.2	0.03	0.26	0.04	0.66	0.11	2.01*
Elderly popul.	0.25	8.78**	0.21	7.35**	0.16	6.59**	0.14	6.39**
Polity	0.00	0.48	0.00	0.35	0.00	0.94	0.00	0.91
Gov. Majority	0.00	0.2	-0.03	-1.83	0.01	0.47	0.00	-0.1
Struct. Adj. Pr.	-0.03	-1.86	0.01	0.84	-0.02	-1.48	-0.02	-1.63
Before Ex. El.	0.02	1.02	0.01	0.54	0.02	1.33	0.02	1.56
After Ex. Elec.	0.01	0.61	0.01	0.54	0.01	0.61	0.02	1.41
Before leg. ele	-0.03	-2.07*	-0.03	-2.1*	-0.04	-1.94*	-0.03	-2.49*
After Leg. Ele.	-0.01	-0.53	0.00	-0.16	-0.01	-0.45	-0.01	-0.88
Constant.	0.08	0.22	-0.03	-0.09	-0.15	-0.67	-0.33	-1.87
	N=160 R ² =0.89		N=156 R ² =0.89		N=156 R ² =0.92		N=152 R ² =0.93	

** Statistically significant at the 1% level

* Statistically significant at the 5% level

Table 4: Results for Models using Expenditures on Goods and Services and State Authority over Spending.

	Original		Outliers		Original		Outliers	
	Coeff.	Z	Coeff.	Z	Coeff.	Z	Coeff.	Z
Lag of G&S.	Not included				0.03	0.24	0.03	0.24
Federal	0.00	-0.13	0.00	-0.13	0.00	0.01	0.00	0.01
St. Auth. Spend.	-0.38	-5.6**	-0.38	-5.6**	-0.37	-4.69**	-0.37	-4.69**
Threshold	-0.02	-2.57**	-0.02	-2.57**	-0.02	-2.27**	-0.02	-2.27*
ENPP	-0.01	-1.26	-0.01	-1.26	-0.01	-1.42	-0.01	-1.42
Trade	0.00	-2.35*	0.00	-2.35**	0.00	-2.12*	0.00	-2.12*
GDP/pc	0.12	0.55	0.12	0.55	0.11	0.51	0.11	0.51
Elderly popul.	-0.05	-0.78	-0.05	-0.78	-0.04	-0.75	-0.04	-0.75
Polity	0.00	-0.11	0.00	-0.11	0.00	0.03	0.00	0.03
Gov. Majority	0.06	2.19*	0.06	2.19*	0.06	2.36*	0.06	2.36*
Struct. Adj. Pr.	-0.02	-1.35	-0.02	-1.35	-0.02	-1.25	-0.02	-1.25
Before Ex. El.	-0.01	-0.77	-0.01	-0.77	-0.02	-0.73	-0.02	-0.73
After Ex. Elec.	-0.01	-0.29	-0.01	-0.29	-0.01	-0.45	-0.01	-0.45
Before leg. ele	-0.01	-0.4	-0.01	-0.4	-0.01	-0.33	-0.01	-0.33
After Leg. Ele.	0.00	-0.13	0.00	-0.13	0.00	-0.1	0.00	-0.1
Constant.	0.39	0.55	0.39	0.55	0.40	0.57	0.40	0.57
	N=95 R ² =0.75		N=95 R ² =0.75		N=93 R ² =0.77		N=93 R ² =0.77	

** Statistically significant at the 1% level

* Statistically significant at the 5% level

As I examine the disaggregate values, the relationship begins to take a more clear shape. Federal states are negatively associated with goods and services (table 2) and positively associated with transfers and subsidies. These

findings appear to contradict Milesi, Perotti and Rosagno (2000). More federal states, which are more majoritarian by nature, do not prefer expenditures on public goods and services.

Table 5: Results for Models using Transfers and Subsidies and State Authority over Spending.

	Original		Outliers		Original		Outliers	
	Coeff.	Z	Coeff.	Z	Coeff.	Z	Coeff.	Z
Lag of T&S.	Not included				0.16	1.23	0.19	2.3*
Federal	0.00	0.05	0.00	-0.1	0.01	0.28	0.01	0.39
St. Auth. Spend.	0.23	2.45**	0.21	2.44**	0.17	1.39	0.11	1.09
Threshold	-0.01	-0.66	0.00	-0.43	-0.01	-0.49	0.00	-0.15
ENPP	0.01	1.33	0.01	1.41	0.01	1.01	0.00	0.96
Trade	0.00	-1.26	0.00	-0.72	0.00	-1.07	0.00	-0.62
GDP/pc	0.08	0.24	0.28	1.27	0.12	0.4	0.33	1.63
Elderly popul.	0.28	2.87**	0.19	2.78**	0.23	2.18*	0.13	1.73
Polity	0.00	0.25	0.01	1.11	0.00	-0.38	0.00	0.74
Gov. Majority	-0.02	-0.8	-0.03	-1.11	-0.02	-0.89	-0.03	-1.34
Struct. Adj. Pr.	-0.02	-1.2	-0.03	-1.46	-0.02	-0.77	-0.02	-1.19
Before Ex. El.	0.02	0.82	0.01	0.73	0.02	0.99	0.02	1.06
After Ex. Elec.	0.01	0.49	0.01	0.55	0.01	0.26	0.02	0.97
Before leg. ele	-0.03	-1.77	-0.02	-1.76	-0.04	-1.69	0.00	0.18
After Leg. Ele.	0.00	-0.04	0.01	0.83	0.00	-0.01	-0.03	-1.97*
Constant.	-0.42	-0.4	-1.10	-1.58	-0.50	-0.53	-1.21	-1.89
	N=92 R ² =0.91.		N91= R ² =0.92		N=89 R ² =0.91		N88= R ² =0.91	

** Statistically significant at the 1% level

* Statistically significant at the 5% level

These findings could be explained by Mukherjee's (2003) use of the norm of universalism. If states show higher degrees of federalism, federal units have a stronger power to act as veto players. According to Mukherjee's interpretation of the norm of universalism, veto players could potentially be coaxed into agreeing with policy by being offered some type of transfer, which would explain the positive relationship between federalism and expenditures on transfers. In order to corroborate this argument more thoroughly, I would need data that directly captures the type and strengths of the various veto player positions that federal units exercise. This data coincides with the data necessary in order to more clearly understand the impact of electoral rules. Although I was unable to procure such data for this study, these findings warrant the need for further research.

In also introduced a second measure of federalism, state authority over spending (SAS), which capture's the state's ability to tax and spend. This measure is important because states enjoying greater spending autonomy might detract from the central government spending, making it look as though government spends less when in fact spending is actually taking place at the federal unit level. In the two models using this variable (tables 4 and 5), the original federal measure failed to reach significance. The SAS variable reached statistical significance at all four variations of the goods and services models (table 4), producing negative coefficients. When used as a predictor of transfers and subsidies (table 5), the variable only produced significant coefficients at the models not using the lag of transfers as a predictor. The smaller N, due to the

limited availability of data on state authority over spending, detracts from the robustness of the findings. Although not very robust, these findings highlight the importance of gathering more in-depth data on the role of the federal units in government spending.

Concluding Remarks

This paper has examined government spending in Latin America, focusing specifically on the relationship between government spending on public goods and services and spending on transfers and subsidies. Mukherjee (2003) has suggested that political fragmentation plays a significant role in government spending, with greater fragmentation leading to lower spending on public goods and greater spending on subsidies and transfers. Electoral rules are also argued to play an important role (Milesi, Perotti and Rosagno, 2000). Much of the literature has relied on large N empirical testing, which fails to take into account elements pertaining to specific areas of the globe. This research has reassessed the impact of party fragmentation on spending in Latin America, accounting for this region's pronounced lack of party ideology and controlling for the impact of electoral rules.

In assessing the strength of the relationship between party fragmentation and government spending in Latin America, this research adopted two distinct variables that captured distinct underlining dynamics of the fragmentation argument. This thorough attempt was successful in disconnecting party fragmentation from government spending in the region. Not as successful was the attempt to account for electoral rules.

Looking beyond Latin America, it is important to note there are other aspects that can impact how governments distribute their resources. Cross sectional studies of rural (Bratton and Van del Walle, 1994) and tropical Africa

(Lemarchand, 1972), as well as case studies of the Congo (Lemarchand, 1973), Nigeria (Whitaker 1970), and Benin (Wantchekon 2003), all suggest that research on African politics needs to pay close attention to patronage issues. In a large N study containing more than one hundred countries, Mukherjee (2003) argues that party fragmentation issues are important because they directly impact resource distribution issues, from infra-structure to welfare. Lemarchand (1972) argues that looking at African resource allocation and distribution issues through the lens of clientelism may provide the most meaningful indicators of political development.

Orozheikina (1994) argues that too strict an ideology has forced Russian political parties to adopt verticalized resource distribution practices as the only form of differentiating themselves from one another. Contrary to the current literature, ideological cohesiveness could potentially be stimulating transfers and subsidies. Although beyond the scope of this paper, the aforementioned research seems to be couched on the theoretical elements similar to ones used in this research; elements that impact resource distribution. Much like how a particularity of Latin America appears to weaken the applicability of all encompassing theory to that region, particularities pertaining to Africa or post-communism can impact those regions as well. If large-N studies made up of hundreds of countries is unable to take region specific elements into account, as this study suggests, do the generalizations drawn from them apply to these regions? Africa, East Asia and post-communist regions all appear to have particular traits impacting their resource distribution. Only after these elements

have been examined more thoroughly, can inferences derived from large-N studies be applied with confidence.

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Appendix A: Data Description

Degree of Economic Development: The variable for degree of economic development is operationalized as the log of the country's GDP per capita in 1995 constant US dollars. This data is made available by the World Development Indicators 2004. The average value for this variable accounting for all observations is 3.69, with a standard deviation of 0.19. The countries with the lowest value are Bolivia and Nicaragua, with the score of 3.28 in 1987 for Bolivia and the in 1990 for Nicaragua. The country with the highest value is Argentina, with a score of 4.08 in 1998. Argentina also has the highest mean, 4.00. When it comes to the variation, Paraguay is the most constant, with a standard deviation of 0.013.

Log of the elderly population: the variable capturing the impact of the elderly population is operationalized as the log of the percentage of the elderly population (64 years and older). This data is made available by the World Development Indicators 2004. The average value of this variable is 1.57, with the highest value being 2.53 and the lowest value being 0.95. The country with the highest log of the elderly population was Uruguay, with a score of 2.53. Mexico is the country with the lowest value, 0.95. Costa Rica is the country with the widest variation, showing a standard deviation of 0.11. The most constant country in was Argentina, showing a standard deviation of 0.046.

Openness to Trade: The variable capturing openness to trade is operationalized as total imports and exports as a percentage of the GDP (Cameron, 1978; Rodrik 1998)). This data is made available by the World Development Indicators 2004. Nicaragua appears as an anomaly in the dataset, having as its lowest value 25.53% of the GDP in 1987 and as its highest value 126.47%, in 1999. The oddity of such values prompted me to run two separate models, one with Nicaragua and one without it. The average value for this variable including Nicaragua is 48.84, meaning that on average; imports and exports account for close to 49% of the GDP of each country in the region. When I exclude Nicaragua, the variable's mean drops to 46.66%. Brazil is the country least opened to trade, with a period average of 17.9%. The country that is most opened to trade during the period is Costa Rica, averaging 77.54% or close to three quarters of its GDP. Argentina is the country with the lowest individual value, 12.35% in 1984, while Costa Rica has the highest value, 97.57% in 1999. The country showing the least variation is Brazil, with a standard deviation of 2.66; while Nicaragua showed the greatest variation, 29.86. Mexico trails Nicaragua with the second greatest variation, 14.25.

Threshold: The threshold variable captures the impact of the electoral rules. It is measured as the threshold to representation to the lower house. The data for this variable is made available by the Database of Political Institutions 2004. This variable ranges from 0, meaning countries have no threshold to representation (Colombia, El Salvador, Mexico until 1984, Nicaragua, Paraguay,

Peru until 1994, Uruguay and Venezuela), to 5%. Countries with a 5% threshold are Panama, Peru after 1994 and Brazil. Argentina is the closest to the mean of 1.6%, with the constant value of 3%. This variable shows very little variation when analyzed country by country, since thresholds are not likely to change frequently. In the dataset, only Mexico and Peru show any change during the period of the study, Mexico going from 0 to 2% in 1985 and Peru going from 0 to 5% in 1994.

Aggregate Expenditure: this variable is operationalized as the central government's expenditures as a percentage of the GDP (Lowery and Berry 1987). The data for this variable is made available by the World Bank's World Development Indicators 2004. The variable's mean is 21, with a standard deviation of 8.7. Nicaragua is the highest aggregate spender, averaging 41.07% of the GDP; followed by Brazil, with an average of 28.89%. Nicaragua also has the highest variation, 13.95, which is fueled by a spike in 1990, reaching 72.01%. Nicaragua's data at the aggregate and disaggregate levels, as well as on the ENPP forced me to treat this country as an outlier.

Expenditures on Transfers and Subsidies: this variable is one of the dependent variables. It is operationalized as the central government's expenditures on transfers and subsidies as a percentage of total GDP (Mukherjee, 2003). This data is made available by the International Monetary Fund's Government Financial Statistics. The variable's mean is 0.36, with a standard deviation of

0.17. Argentina is an outlier in this variable, for it shows a 1.09 value in 1984. This value suggests that in this year, Argentina spent 109% of its expenses in transfers and subsidies. I was unable to verify whether this value has been reported by mistake or it relates to debt accruing, prompting me to treat it as an outlier. Uruguay is the country with the highest mean, 71%. El Salvador has the lowest score in one year, spending only 8% of its budget on transfers and subsidies in 1998. Brazil is the most constant spender on transfers, with a standard deviation of 0.15. Panama shows the highest variation, with a standard deviation of 0.35.

Expenditures on Public Goods and Services: this variable is the other dependent variable. It is operationalized as the central government's expenditures on public goods and services as a percentage of total GDP (Mukherjee, 2003). This data is made available by the International Monetary Fund's Government Financial Statistics. Nicaragua is an outlier in this variable, with the mean of 0.65, against the overall mean of 0.42. Nicaragua's high mean is brought up by a score of 127% in 1988. Similarly to Argentina, I was unable to verify whether the score was reported by mistake or related to debt accruing. Bolivia follows Nicaragua with the second highest mean, 0.56, meaning Bolivia spends on average 56% of its government budget on public goods and services. Brazil has the lowest average spending in the period: 17.6%. Mexico, with a period average of 30.58%, shows the least variation, with a standard deviation of 0.04. Peru, on

the other hand, averages a high 50.75%, but has the highest variation in the period, with a standard deviation of 0.18.

Structural Adjustment Program: The structural adjustment program is a dummy variable that is coded 1 for when a country is under a program and zero when a country is not under the program. The data for this variable is made available by Abouharb and Cingranelli (2006). The variables overall mean is 0.6, meaning the region as a whole is under the program for 60% of the period. Argentina has a mean of 1, meaning they are under the program for the entire period.

Paraguay has the lowest mean, 0, meaning this country is never under a program during the period of the study. Colombia (0.47), Brazil (0.58), Peru (0.56) and Venezuela (0.47) are under the program for about half the time. Panama (0.93), Uruguay (0.88), Bolivia(0.88) and Mexico (0.94) have higher scores, meaning they are under structural adjustment program for the majority of the period.

Effective Number of Political Parties (ENPP): The effective number of political parties variable is aimed to capture the impact of party fragmentation. This variable is operationalized by calculating the inverse of the Hirsch-Herfindahl Government index (Mukherjee, 2003). The Hirsch-Herfindahl index is calculated by adding the squares of each party's percentage of seats. The data for this variable is made available by the Database of Political Institutions 2003. This variable is inversed so that larger values can be associated with greater

fragmentation. The variable's mean is 3.22, with a standard deviation of 1.52. Brazil has the highest country mean, 5.71, and the second highest standard deviation, 2.55. Nicaragua has the highest standard deviation, 3.31, which is fueled by a mean of 3.29, a lowest possible score of 2.04 in 1991-1992 and a highest possible score of 14.28 in 1984. Paraguay (2.12) and Mexico (2.27) have the lowest means. Paraguay has the lowest standard deviation, 0.24, making it the most constant country when it comes to the number of parties.

Government Majority: Government majority is a dummy variable that captures whether or not the executive's party holds the majority of seats in both upper and lower houses. Countries score a zero if the executive's party does not hold the majority of seats and score a 1 if the executive's party does hold the majority. Mexico and Paraguay have the highest means, 1, meaning the executive's party of both these countries enjoyed the majority of seats during the entire period used in this research. Argentina (0.94) and Peru (0.93) also have high means. Panama (0.33) and El Salvador (0.29) have low scores, with the executive only enjoying the majority of the houses about 30% of the time. Nicaragua behaves, again, as an outlier. It's score of 0.58, meaning the executive's party held control of both houses around 60% of time, is unexpected given that country's high fragmentation (ENPP=3.31) score. Brazil, Bolivia and Colombia all have a mean of zero, meaning that the executive's party never during this study held the majority of the houses.

Polity: The polity variable is meant to capture the degree of democratic advancement of a nation. This data is made available by the Polity IV Project, hosted by the University of Maryland. This variable originally ranges from zero to ten, zero being the least and ten being the most democratic. In this study, the countries present in the dataset also have values ranging from zero to ten. The variable's mean is 6.79, with a standard deviation of 2.91. Mexico has the lowest average score, 3.17, with a lowest score of 1 from 1984 through 1987 and a highest score of 8 in 2000. Mexico is followed by Nicaragua as the second lowest, with an average of 4.94. Nicaragua's lowest score was 1, from 1984 through 1989. Nicaragua's score jumps up from 1 to 6 in 1990 and peaks at 8 in 1995. Costa Rica, often referred to as the Switzerland of Latin America, boasts a perfect 10 average. Uruguay follows with the second highest average, 9.17, with one zero score in 1984 being substituted by a 9 in 1985 and stabilizing at 10 in 1989. Other averages are Bolivia (8.49), Venezuela (8.35), Colombia (7.88), Brazil (7.47), Argentina (7.41), El Salvador (6.58), Peru (4.93), and Paraguay (4.29).

Year After Executive Elections (YAEE): This variable is a dummy variable that scores one for years following an executive election. The data for this variable is made available by the Database of Political Institutions 2004. Argentina held executive elections in 1989, 1995 and 1999. Bolivia, Colombia, Costa Rica, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela all hold concurrent legislative and executive elections. Bolivia's elections took place in

1985, 1989, 1993, and 1998. Colombia's took place in 1986, 1990, 1994, and 1999. Costa Rica's elections were in 1986, 1990, 1994, and 1998. Nicaragua's elections are every six years, taking place in 1984, 1990 and 1996. Panama and Peru hold concurrent elections every five years, which took place in 1985, 1990, 1995 and 2000. Uruguay's and El Salvador's elections are also every five years, but took place in 1984, 1989, 1994 and 1999. Mexico held executive elections every 6 years (1988 and 1994), but switched to four year terms in 1994, holding elections in 1997 and 2000. Paraguay's elections took place in 1988, 1989, 1993 and 1998. Brazil's executive elections took place in 1985, 1989, 1994 and 1998. Finally, Venezuela held concurrent executive-legislative elections in 1988, 1993 and 1998.

Year Before Executive Elections (YBEE): This variable is a dummy variable that scores one for years previous to an executive election. The data for this variable is made available by the Database of Political Institutions 2004.

Year After Legislative Elections (YALE): This variable is a dummy variable that scores one for years following a legislative election. The data for this variable is made available by the Database of Political Institutions 2004. Argentina held legislative elections every other year starting in 1987. Brazil held legislative elections in 1986, 1990 and 1998. El Salvador held legislative elections in 1985, 1988, 1991, 1994, and 1997. Mexico held legislative elections in 1985, 1988,

1991, 1994, 1997 and 2000. All other countries held legislative elections concurrently with their executive elections.

Year Before Legislative Elections (YBLE): This variable is a dummy variable that scores one for years previous to a legislative election. The data for this variable is made available by the Database of Political Institutions 2004

State Spending Authority: This variable is a dummy variable. Countries score 1 if the state has authority over taxing or spending. The data for this variable is made available by the Database of Political Institutions 2004. The limited quantity of information available for this variable limits its use, forcing me to run models twice, one with and the other without this variable. Argentina, Brazil, Colombia, Mexico and Venezuela score one, while El Salvador and Costa Rica score zero. There is no data for the remainder countries. There is no variation within each country.

Federal: This variable captures the degree of federalism of each country. This variable is a composite containing two elements. Countries score one point for having appointed executives with elected legislatures at the state level or two points for elected executives and elected legislatures at the state level. Countries score another one point for appointed executives with elected legislatures at the municipal level, or two points for elected executives and elected legislatures at the municipal levels. The variable has a total range of 5, from zero to four. All

values are present in the dataset used in this study. The lowest possible value is Panama's and El Salvador's (zero) and the highest is Colombia's and Venezuela's (four). The variable's mean is 1.68, with a standard deviation of 1.18. Argentina has the longest and steadiest history of federalism, scoring 3 with no variation. Although Venezuela and Colombia have highest averages, both at 3.23, their scores reflect changes in the direction of a more federal country. Both countries score 1 in 1984 and build up to the highest possible score of 4. Brazil (2), Costa Rica (2), Mexico (2), Panama (1) and Peru (1) show no variation in their degree of federalism all through the period of this study. Bolivia (1.5) shows some variation by allowing for directly elected executives and legislators at the municipal level after 1988, going from zero to two. Nicaragua (0.75) observed the exact same change as Bolivia's, only that took place in 1995. Uruguay scores 1.88 after allowing for directly elected state executive and legislators after 1985. The lowest score is El Salvador's and Panama, which score zero.

Appendix B: Correlation Matrix

	Aggr. Spend	G&S	T&S	Fdrl	SSA	E. Elec	L. Elec	SAP	Mjrt	Pity	Threst	Elder	GDP	Trade
Aggr. Spend	1.0													
Goods&Serv.	-0.3	1.0												
Transfers	-0.2	-0.1	1.0											
Federalism	-0.3	-0.2	0.4	1.0										
SSA	0.1	-0.6	0.4	0.5	1.0									
Exec Elec	0.1	0.0	0.1	-0.1	-0.1	1.0								
Legisl. Elec	-0.1	0.0	0.2	0.0	0.1	0.6	1.0							
Struc Adj. P	-0.1	0.0	0.0	0.0	-0.1	0.1	0.2	1.0						
Gov. Major.	-0.2	0.2	0.2	-0.1	0.2	0.0	0.2	0.2	1.0					
Polity Sc.	-0.1	-0.1	0.3	0.4	0.0	0.1	0.0	-0.3	-0.4	1.0				
Threshold	0.5	-0.4	0.3	-0.3	0.2	0.0	0.1	0.2	0.1	-0.1	1.0			
LogElderly	-0.3	-0.1	0.6	0.3	0.0	0.0	0.1	0.2	0.1	0.4	0.3	1.0		
LogGDP/pc	-0.2	-0.1	0.6	0.1	0.3	0.0	0.2	0.4	0.6	-0.2	0.5	0.6	1.0	
Trade	-0.2	0.3	-0.4	0.0	-0.3	0.1	-0.1	0.0	0.0	0.0	-0.6	-0.6	-0.4	1.0

Vita

Carlos Costa was born on June 21st, 1975, in Sao Paulo, Brazil. He moved to the United States in 1995 in order to pursue his higher education. In 1999, Carlos received his bachelor's degree in political science from the University of California at Berkeley. Carlos went on to work for 5 years before returning to school in order to pursue his master's degree in comparative politics. Carlos joined Louisiana State University in 2004, where he pursued research related to redistributive politics. His thesis studies the impact of party fragmentation and electoral rules on government spending in Latin America.